

# **PUBLIC HEALTH INFORMATICS FOR THE FUTURE**

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**The Redesigning of  
MICA/PROFILES/EPHT  
March 18, 2015**

**Nancy Hoffman, RN, MSN  
DHSS Project Manager**

# OVERVIEW

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- ◆ Vision
- ◆ Phases of Change
- ◆ Security/Confidentiality
- ◆ Query Screens

# VISION

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**The overall goal of the PHIMS project is to:**

- ◆ **provide a common means to receive, validate, process and disseminate public health data, and**
- ◆ **give appropriate level of access to these data for the purpose of determining the health status and needs of Missourians**

# **ANTICIPATED PROJECT RESULTS**

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- ◆ **Achieve standardizations of reporting, both to and from DHSS**
- ◆ **Implement standards consistent with national data standards, and**
- ◆ **Accomplish standardizations of data presentation across all areas of DHSS**

# PHASES OF CHANGE

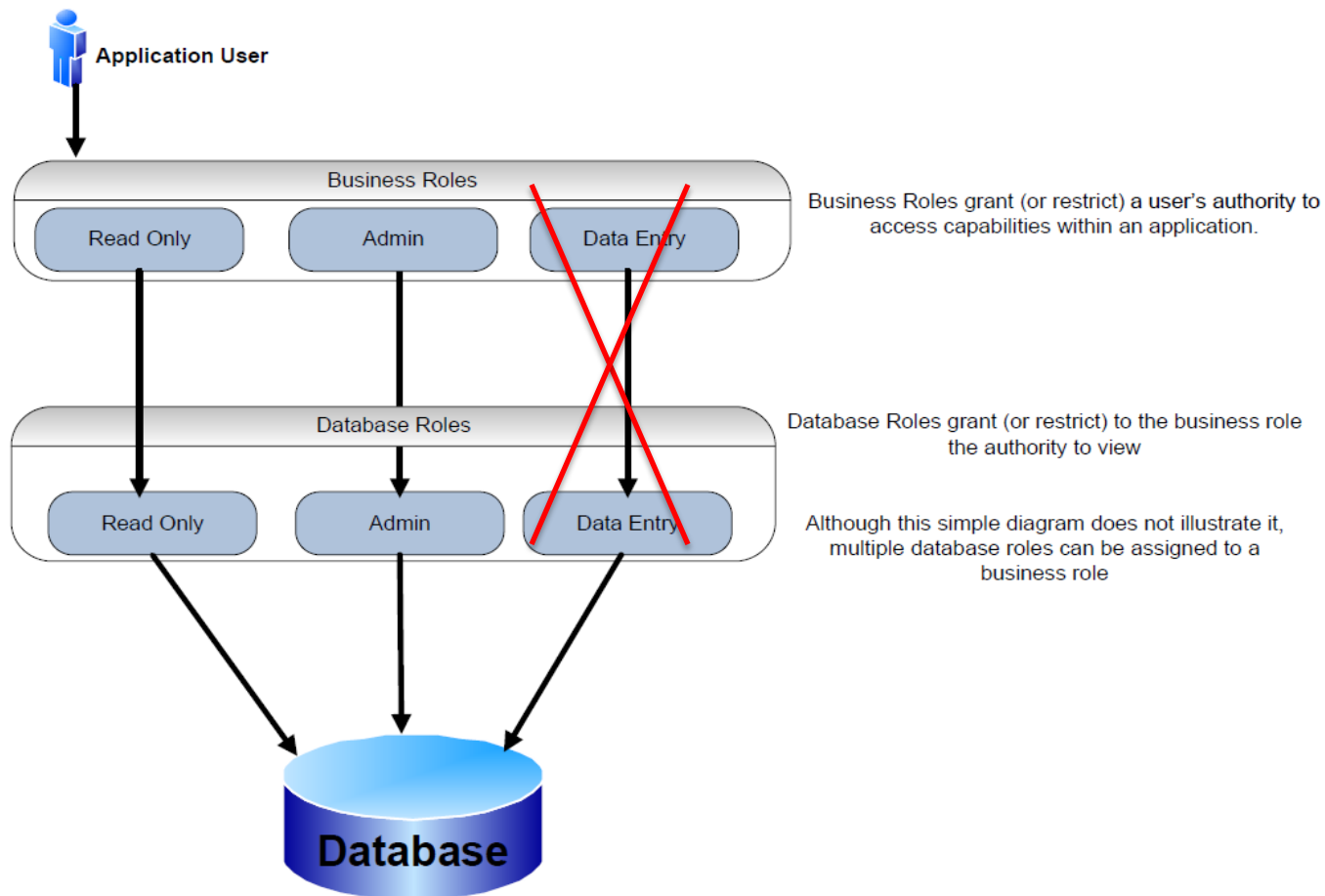
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- ◆ **Define & Document Current Systems**  
EPHT, MICAs/Profiles
- ◆ **Create Data Warehouse & Convert Data**  
Create OLAP Cubes
- ◆ **Create a Secure Data Portal**
- ◆ **Design & Develop Query Screens**  
Increased Functionality (Ways to Display Data)
- ◆ **Define Security & Confidentiality**

# ASAP STRUCTURE

## Business and Database Roles

Typically DHSS applications use a combination of Business and Database roles to grant and/or restrict access to application functions and data



# DEFINITIONS

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- ◆ Privacy – Collecting only the information needed and using it for that purpose.
- ◆ Confidentiality – Not releasing information that could identify individuals or households.
- ◆ Security – Keeping data safe from unauthorized access and use.

# SECURITY LEVELS FOR AGGREGATE DATA

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- ◆ **Level 1 – General Public – No-log in required-Small cell data suppression in effect**
- ◆ **Level 2 – Registered User – user ID and password required – Small cell data suppression in effect – more data attributes available, 2 X 2 tables, advanced query page available.**
- ◆ **Level 3 – Appropriate LPHA and DHSS Staff, IRB Approved Researchers – Suppression rules off and advanced query page available. The ability to access more granular data (County, Zip Code, Zip Code Tabulation Areas (ZCTA), census tract levels” where available**



## **SECURITY LEVELS (con't)**

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- ◆ **Level 4 – MICA and other approved analysts – same as Level 3 with no restriction on geography and all attributes available**
- ◆ **Additional roles and levels may be added as the need is identified. The currently defined levels may be modified over time as required.**

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# PHIMS

**Public Health Information  
Management System**

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PHIMS

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# Missouri Department of Health & Senior Services

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-Page-Title--x



Build-a-Tablex Make-a-Mapx Create-a-Chartx View-the-Metadatasx View-Documentationx

Query-Builderox

Error-Messag-here x

Submit Query

Reset Query

Save Query

## Choose-Your-Datax

Geography: County x

County: All x

Show-State-Totals: x



Year: 2014 x

Age: All x

Sex: All x

Race: All x

Ethnicity: All x

Optional-Filters: All x

• -f

## Build-Your-Tablef

Row-Label: Statewide x Row-Totals: x Column-Label: x

All of xyz x Column-Totals: x

If-2x2,-Inner-Row-Label: x

Inner-Column-Labels: x

Statistics-to-be-Displayed: Counts and Rates x

Age-Adjustment-Options: x

Crude Rate x

Confidence-Intervals-for-Rates: 95% Confidence Intervals x

Review Example Table

Example-Tablef

Warnings/info-here x

Statewide=	Counts	Rates	Lower95%-Conf.Limits	Upper95%-Conf.Limits
Missouri	####	#,##	#,##	#,##

Submit Query

Reset Query

Save Query

# CHOOSE YOUR DATA

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## ◆ Geography

- Statewide
- County
- City
  - Eastern Jackson County
  - Independence
  - Joplin
  - Kansas City

# **CHOOSE YOUR DATA (con't)**

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- **BRFSS Region**
- **LPHA Region**
  - **Regions A-I**
- **RPC Region**
- **Zip/ZCTA**
- **Census Tract**
  - **Tract are only valid within one decade.**
- **WIC Agency**
- **Family Service Region**

# CHOOSE YOUR DATA (con't)

## ◆ Age

Age: ☐ → Single-Age ☐ All  
☐ → Age-Group ☒ → Under-15  
☐ → Custom-Group ☒ → 15--24  
☐ → 25--44  
☐ → 45--64  
☐ → 65-and-Over

Example-Table

	Age					
	Under-15		15--24		Total-for-selection	
County	Count	Rate	Count	Rate	Count	Rate
County	###	#.#	###	#.#	###	#.#
Total for selection	###	#.#	###	#.#	###	#.#
Missouri	###	#.#	###	#.#	###	#.#



Age: ☐ Single Age ☐ All ☒ 0-4 ☐ 5-9 ☐ 10-14 ☐ 15-19 ☐ 20-24 ☐ 25-29 ☐ 30-34 ☐ 35-39 ☐ 40-44 ☐ 45-49 ☐ 50-54 ☐ 55-59 ☐ 60-64 ☐ 65-69 ☐ 70-74 ☐ 75-79 ☐ 80-84 ☒ 85 and Over

	Age									
	0-4		5-9		80-84		85 and Over		Total for selection	
County	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate
County	###	#.#	###	#.#	###	#.#	###	#.#	###	#.#
Total for selection	###	#.#	###	#.#	###	#.#	###	#.#	###	#.#
Missouri	###	#.#	###	#.#	###	#.#	###	#.#	###	#.#

[illegible]

# **BUILD YOUR TABLE**

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- ◆ **Row Label dropdown**
- ◆ **Column Label dropdown**
- ◆ **If 2x2 Inner Row Label dropdown**
- ◆ **Inner Column Label dropdown**
- ◆ **Statistics to be Displayed dropdown**
- ◆ **Age Adjustment Options dropdown**
- ◆ **Confidence Intervals for Rates dropdown**

# BUILD YOUR TABLE (con't)

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## ◆ Example Table

Statewide	Count	Rate	Lower 95% Conf. Limit	Upper 95% Conf. Limit
Missouri	###	##	##	##

# BUILD YOUR TABLE (con't)

Example Table

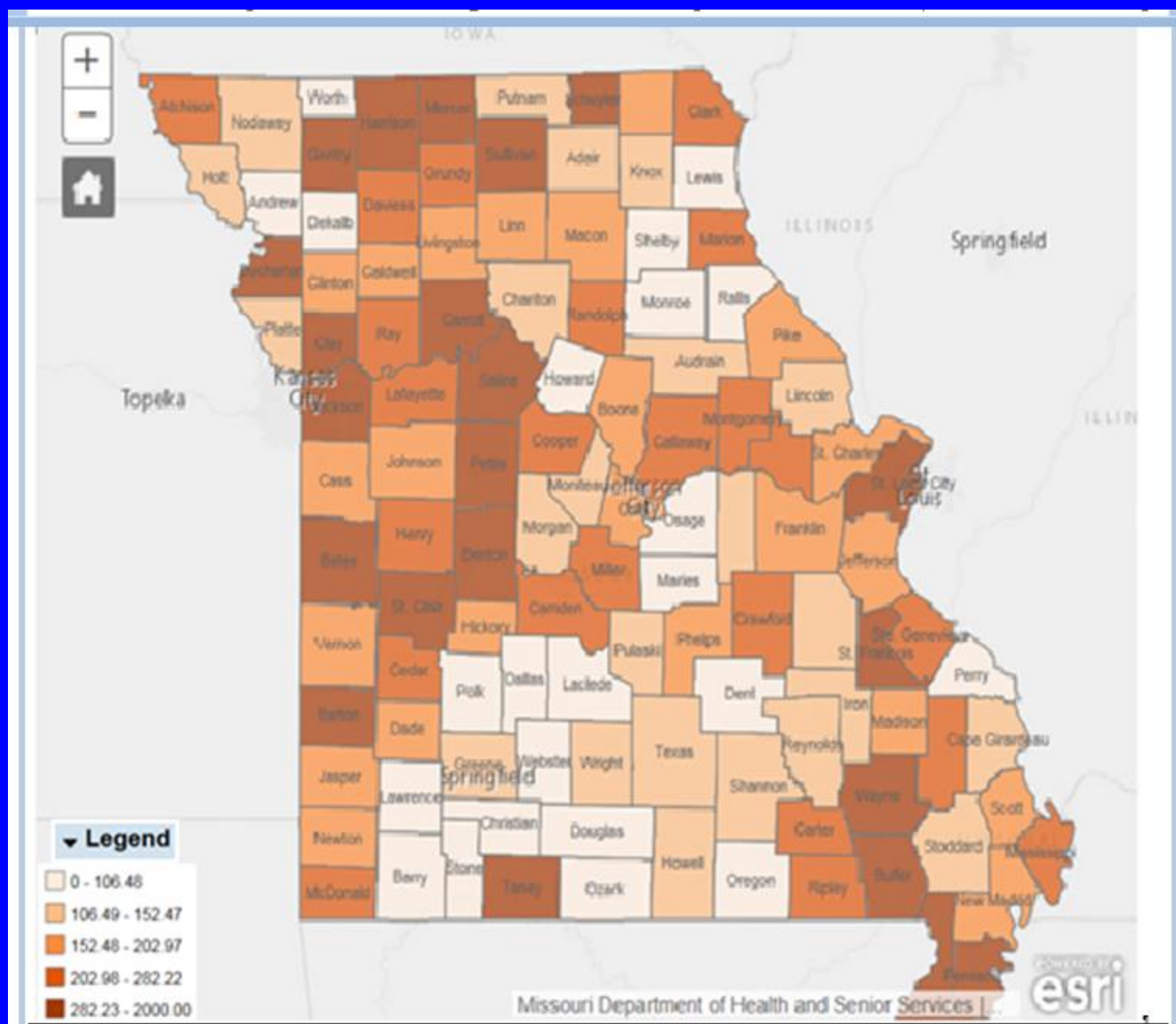
Group								
	Sub-Group1		Sub-Group2		Unknown		Total-for-selection	
Statewide	Count	Rate	Count	Rate	Count	Rate	Count	Rate
Missouri	###	##	###	##	###	##	###	##

Example Table

	Group															
	Sub-Group1				Sub-Group2				Unknown				Total-for-selection			
County	Count	Rate	Lower95% Conf-Limit	Upper95% Conf-Limit	Count	Rate	Lower95% Conf-Limit	Upper95% Conf-Limit	Count	Rate	Lower95% Conf-Limit	Upper95% Conf-Limit	Count	Rate	Lower95% Conf-Limit	Upper95% Conf-Limit
County	###	##	##	##	###	##	##	##	###	##	##	##	###	##	##	##
Total-for-selection	###	##	##	##	###	##	##	##	###	##	##	##	###	##	##	##

# MAP QUERY BUILDER





# SYSTEM ENHANCEMENTS

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- ◆ **More Granular Data where available**
- ◆ **Expanded Mapping (side-by-side maps, maps and charts, map and graph)**
- ◆ **Expanded Query Options**
- ◆ **Custom Age Ranges**
- ◆ **Ability to Save Queries (Not Query Results)**
- ◆ **Available on Hand-Held Devices – WEB Application**

# QUESTIONS?

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Contact:

Nancy Hoffman at:

[Nancy.Hoffman@health.mo.gov](mailto:Nancy.Hoffman@health.mo.gov) or by  
phone at 573.751.6750

THANK YOU!